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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/579,575
Filing Date: August 24, 2009
Appellant(s): LESCUYER ET AL.

William M. Lee, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4-15-2011 appealing from the Office action mailed 10-13-2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

20030081607	**Kavanaugh et al.**
7,289,504	**Hippelainen et al.**
7,346,677	**Mohaban et al.**
20030110252	**Yang-Huffman**

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **5, 20 - 23, 26 - 29** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Kavanaugh et al.** (US PGPUB No. **20030081607**) in view of **Hippelainen et al.** (US Patent No. **7,289,504**).

Regarding Claim 5, Kavanaugh discloses the mobile station of claim 20, wherein each of the communications sessions to exchange packet data flows. (Kavanaugh para 014, ll 1-7: filtering data packets in GTP signaling messages and analyzing selected messages; para 065, ll 1-15: additional checks are performed providing additional security for PDP context messages)

Regarding Claim 20, Kavanaugh discloses a mobile station comprising:

a) a wireless interface to communicate over a wireless link to an access network; (Kavanaugh para 008, ll 1-5: MS (mobile station) attaches and registers with a GPRS (General Packet Radio Service) mobile (wireless, radio) communications network; para 005, ll 11-13: mobile terminal (MT) connects to a network through a UTRAN access network)

processing hardware configured to:

c) in response to activation of each of the plural communication contexts, create a corresponding security task that furnishes a respective firewall function, wherein the firewall function of each of the security tasks is associated with a respective set of filtration parameters, wherein the set of filtration parameters for a first of the security tasks differs from the set of filtration parameters for a second of the security tasks; (Kavanaugh para 013, ll 4-22: analyzing GTP messages against plurality of filtering criteria (al least one constituent parameter); analyzing

messages selected from GTP path management and GTP tunnel management messages; para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists) and

d) limit data flow in each of the communication sessions using the respective firewall function according to the corresponding set of filtration parameters. (Kavanaugh para 034, ll 1-10: GTP filter inspects all GTP packets (data flow) and performs specific filtering rules based on source and destination addresses, message types, and GTP version number (at least one parameter); GTP filters, controls what messages are permitted and denied; para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists)

Kavanaugh discloses for b): to activate communication contexts for communication of data in respective communication sessions. (Kavanaugh para 008, ll 1-5: initiates an activate PDP context request; para 009, ll 9-5-17: create PDP context request message, message sent over IP based network, send context response message when successful activation)

Kavanaugh does not explicitly disclose to activate plural communications contexts. However,

b) activate plural communication contexts for communication of data; (Hippelainen col 2, ll 53-54: PDP contexts are activated and deactivated through mobility management procedures; col 8, ll 20-31: PDP context table for storing activated PDP contexts of connections or sessions)

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh to activate plural communications contexts as taught by Hippelainen. One of ordinary skill in the art would have been motivated to employ the teachings of Hippelainen for the benefits achieved from unique allocation of identification for a communications in an efficient manner. (Hippelainen col 3, ll 52-55)

Regarding Claims 21, 27, Kavanaugh discloses the mobile station, method of claims 20, 26, wherein the communication contexts comprise Packet Data Protocol (PDP) contexts. (Kavanaugh para 008, ll 1-5; para 009, ll 9-5-17: initiates an activate PDP context request create PDP context request message, message sent over IP based network, send context response message when successful activation; para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists)

Kavanaugh does not explicitly disclose plural communications contexts. Hippelainen discloses plural communications contexts. (Hippelainen col 2, ll 53-54: PDP contexts are activated and deactivated through mobility management procedures; col 8, ll 20-31: PDP context table for storing activated PDP contexts of connections or sessions)

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh for plural communications contexts as taught by Hippelainen. One of ordinary skill in the art would have been motivated to employ the teachings of Hippelainen for the benefits achieved from unique allocation of identification for a communications in an efficient manner. (Hippelainen col 3, ll 52-55)

Regarding Claims 22, 28, Kavanaugh discloses the mobile station, method of claims 21, 27.

Kavanaugh does not explicitly disclose PDP contexts simultaneously active.

However, Hippelainen discloses wherein the plural PDP contexts are simultaneously active. (Hippelainen col 2, ll 30-32: table of multiple simultaneous PDP contexts active; col 10, ll 39-41: identifier depends on number of simultaneous PDP contexts which the GSN can support)

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh for PDP contexts simultaneously active as taught by Hippelainen. One of ordinary skill in the art would have been motivated to employ the teachings of Hippelainen for the benefits achieved from unique allocation of identification for a communications in an efficient manner. (Hippelainen col 3, ll 52-55)

Regarding Claims 23, 29, Kavanaugh discloses the mobile station, method of claims 20, 26.

Kavanaugh does not disclose plural contexts simultaneously active.

However, Hippelainen discloses wherein the plural communication contexts are simultaneously active. (Hippelainen col 2, ll 30-32: table of multiple simultaneous PDP contexts active; col 10, ll 39-41: identifier depends on number of simultaneous PDP contexts which the GSN can support)

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh

for plural contexts simultaneously active as taught by Hippelainen. One of ordinary skill in the art would have been motivated to employ the teachings of Hippelainen for the benefits achieved from unique allocation of identification for a communications in an efficient manner. (Hippelainen col 3, ll 52-55)

Regarding Claim 26, Kavanaugh discloses a method comprising:

an access network and core network; (Kavanaugh para 008, ll 1-5: MS (mobile station) attaches and registers with a GPRS (General Packet Radio Service) mobile (wireless, radio) communications network; para 005, ll 11-13: mobile terminal (MT) connects to a network through a UTRAN access network)

b) in response to activation of each of the plural communication contexts, creating, in the mobile station, a corresponding security task that furnishes a respective firewall function, wherein the firewall function of each of the security tasks is associated with a respective set of filtration parameters, wherein the set of filtration parameters for a first of the security tasks differs from the set of filtration parameters for a second of the security tasks; (Kavanaugh para 013, ll 4-22: analyzing GTP messages against plurality of filtering criteria (al least one constituent parameter); analyzing messages selected from GTP path management and GTP tunnel management messages; para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists) and

c) limiting data flow in each of the communication sessions using the respective 12 firewall function in the mobile station according to the corresponding set of

filtration parameters. (Kavanaugh para 034, ll 1-10: GTP filter inspects all GTP packets (data flow) and performs specific filtering rules based on source and destination addresses, message types, and GTP version number (at least one parameter); GTP filters, controls what messages are permitted and denied;; para 065, ll 1-15: checked to verify PDP (packets data protocol) context exists)

Kavanaugh discloses for a): activating, by a mobile station, communication contexts for communication of data in respective communication sessions between the mobile station and at least one other endpoint over. (Kavanaugh para 008, ll 1-5: initiates an activate PDP context request; para 009, ll 9-5-17: create PDP context request message, message sent over IP based network, send context response message when successful activation)

Kavanaugh does not explicitly disclose plural communications contexts.

However, Hippelainen discloses:

a) activating plural communication contexts for communication of data;

(Hippelainen col 2, ll 53-54: PDP contexts are activated and deactivated through mobility management procedures; col 8, ll 20-31: PDP context table for storing activated PDP contexts of connections or sessions)

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh for plural communications contexts as taught by Hippelainen. One of ordinary skill in the art would have been motivated to employ the teachings of Hippelainen for the benefits achieved from unique allocation of identification for a

communications in an efficient manner. (Hippelainen col 3, ll 52-55)

3. Claims **4, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kavanaugh-Hippelainen** and further in view of **Mohaban et al.** (US Patent No. **7,346,677**).

Regarding Claim 4, Kavanaugh discloses the mobile station of claim 20, wherein activation of each of the communication contexts is based on parameters selected from among an address of the module or of equipment within which it is incorporated (Kavanaugh para 034, ll 1-4: filtering rules based on source and destination addresses (communications module or equipment address)) or the target network's key. (Kavanaugh para 034, ll 1-10: GTP filters, controls what messages are permitted and denied; para 36, ll 1-7: path management protocol to check state of GSN nodes for which a packet data protocol (PDP) has been established)

Kavanaugh does not explicitly disclose a service quality associated with data flows exchanged.
However, Mohaban discloses a service quality associated with the data flows exchanged. (Kavanaugh para 034, ll 1-4: filtering rules based on source and destination addresses (communications module or equipment address))

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh a service quality associated with data flows exchanged as taught by Mohaban. One of ordinary skill in the art would have been motivated to employ the teachings of Mohaban

for the benefits of the integration of applications into a policy based network system whereby application developers participate in the decision making concerning how to apply quality of service policies to a particular traffic flow. (Mohaban col 4, ll 52-56)

Regarding Claim 14, Kavanaugh discloses the method of claim 26, wherein activation of each of the communication contexts is based on parameters selected from among an address of the mobile station and an access point name. (Kavanaugh para 034, ll 1-10: inspects and performs specific filtering rules based on source and destination addresses (module address); GTP filters, controls what messages are permitted and denied; para 36, ll 1-7: path management protocol to check state of GSN nodes for which a packet data protocol (PDP) has been established; para 008, ll 1-5: specify access point name when registering mobile station

Kavanaugh does not explicitly disclose a service quality associated with the exchange of data flows.

However, Mohaban discloses a service quality associated the respective communication session. (Mohaban col 5, ll 31-37: determine processing policies that associate traffic flows with quality of service)

Motivation for Mohaban to disclose a service quality associated with the exchange of data flows is as stated in Claim 4 above.

4. Claims **24, 25, 30, 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kavanaugh-Hippelainen** and further in view of **Yang-Huffman** (US PGPUB No.

20030110252).

Regarding Claims 24, 30 Kavanaugh discloses the mobile station of claims 20, 26.

Kavanaugh discloses to modify one or more filtration parameters of a particular one of the sets of filtration parameters.

Kavanaugh does not explicitly disclose a user interface to receive user input.

However, Yang-Huffman discloses a user interface to receive user input to modify one or more filtration parameters of a particular one of the sets of filtration parameters. (Yang-Huffman para 032, ll 1-9: GUI (graphical user interface) for modifying data attributes (parameters))

It would have been obvious to one of ordinary skill in the art to modify x to a user interface to receive user input as taught by Yang-Huffman. One of ordinary skill in the art would have been motivated to employ the teachings of Yang-Huffman for the benefits and convenience achieved from remote management in controlling and managing multiple communications contexts from a single server. (Yang-Huffman para 032, ll 10-11)

Regarding Claims 25, 31, Kavanaugh discloses the mobile station, method of claims 24, 30.

Kavanaugh does not explicitly disclose a graphical user interface.

However, Yang-Huffman discloses wherein the user interface is a graphical user interface. (Yang-Huffman para 032, ll 1-9: GUI (graphical user interface) for modifying data attributes (parameters))

It would have been obvious to one of ordinary skill in the art to modify Kavanaugh for a graphical user interface as taught by Yang-Huffman. One of ordinary skill in the art would have been motivated to employ the teachings of Yang-Huffman for the benefits and convenience achieved from remote management in controlling and managing multiple communications contexts from a single server. (Yang-Huffman para 032, ll 10-11)

(10) Response to Argument

A. Ground of rejection 1 (claims 5, 20 to 23, and 26 to 29)

Claims 5, 20 to 23 and 26 to 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kavanaugh (US PGPUB No. 2003/0081607) in view of Hippelainen (US Patent No. 7 289 504).

1. Applicant argues on page 7, lines 1-4 of Appeal Remarks *that the obviousness rejection is erroneous since neither Kavanaugh nor Hippelainen discloses or hints at creating, in the mobile station, a corresponding security task that furnishes a respective firewall function, in response to activation of each of the plural communication contexts by the mobile station.*

The Examiner disagrees. Kavanaugh discloses that the GSN is considered a mobile station. And, Kavanaugh discloses the creating and limiting limitations for claim 26 which indicate that the creating and limiting must be completed in a mobile station. Hippelainen is not used to disclose this indicated claim limitation. *(Appeal Remarks Page 7, Lines 24-26)*

There does not appear to be a definition for the term *a mobile station* within the specification. Therefore, a definition for a mobile station was obtained. A mobile station is defined *as a wireless portable terminal device used in a radio network designed to establish and maintain connections between mobile terminals or between mobile terminals and one or more mobile fixed base stations (BSs).* (http://computer.yourdictionary.com/ms)

Kavanaugh discloses a wireless or radio device used to establish, maintain and/or control communications for mobile terminals. The GSN (defined as a GPRS (General Packet Radio Service) Support **Node**) is a mobile station since it provides communication links for mobile terminals. In addition, the GSN is also an endpoint for a GTP filtering tunnel. The GSN filters network traffic which is equivalent to limiting a data flow over a communications link. (Kavanaugh para 005, ll 3: two mobile stations connected or attached; para 007, ll 2-8: establish GTP tunnel between two GSN nodes; handle GTP connection when MS (mobile stations) roam) The filtering function of the GSN is analogous to a firewall function. The specification on page 1, lines 15-16 discloses that a firewall system filters packets at receipt and control the emission (or output) of packets by transmission. Kavanaugh discloses the GSN filtering the data flow of packets.

2. Applicant argues on page 7, lines 4-7 of Appeal Remarks *that there is no hint in either Kavanaugh or Hippelainen regarding limiting data flow in each of the*

communication sessions using the respective firewall function in the mobile station according to the corresponding set of filtration parameters.

The Examiner disagrees since the GSN of Kavanaugh is used to filter network traffic which is equivalent to limiting a data flow over a communications link. (Kavanaugh para 005, ll 3: two mobile stations connected or attached; para 007, ll 2-8: establish GTP tunnel between two GSN nodes; handle GTP connection when MS (mobile stations) roam)

3. Applicant argues on page 8, lines 5-6 *that independent claim 20 is allowable over Kavanaugh and Hippelainen for similar reasons as claim 26.*

The Examiner disagrees since independent claim 20 has similar limitations as independent claim 26. Responses to arguments for independent claim 26 answer arguments against independent claim 20.

B. Ground of rejection 2 (claims 4 and 14)

Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kavanaugh- Hippelainen and further in view of Mohaban (US patent no. 7 346 677).

1. Applicant argues on page 8, lines 10-11 of Remarks *that Claims 4 and 14 are dependent on respective independent claims 20 and 26. Claims 4 and 14 are thus also allowable as being dependent on an allowable claim.*

The Examiner disagrees. The Examiner has responded to arguments against independent claims 20 and 26. The responses to arguments against the independent claims answer arguments against associated dependent claims 4 and 14.

C. Ground of rejection 3 (claims 24, 25, 30 and 31)

Claims 24, 25, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kavanaugh-Hippelainen and further in view of Yang-Hoffman (US PGPUB no. 2003/0110252).

1. Applicant argues on page 8, lines 15-18 of Appeal Remarks *that claims 24, 25, 30 and 31 are also allowable, at least by virtue of the dependence on an allowable claim.*

The Examiner disagrees. The Examiner has successfully responded to arguments against independent claims 20 and 26. The responses to arguments against the independent claims answer arguments against associated dependent claims 24, 25, 30 and 31.

Conclusion

Kavanaugh discloses a mobile station. Kavanaugh discloses a filtering function performed by the mobile station and analogous to a firewall. In addition, Kavanaugh discloses that the filtering function also controls and limits the flow of data over the communications link.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Kyung H Shin/

Primary Examiner, Art Unit 2443

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